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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/954,947      | 09/18/2001  | Josef Steininger     | 13322US01           | 8515             |

7590 10/03/2003

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| EXAMINER |
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JUNG, WILLIAM C

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| ART UNIT | PAPER NUMBER |
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3737

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/954,947

Applicant(s)

STEININGER ET AL.

Examiner

William Jung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 13, 16, 21, 23, and 24 rejected under 35 U.S.C. 102(b) as being anticipated by *Mochizuki et al* (US 5,152,294).

Mochizuki et al anticipates all claimed invention in claims 1, 2, 5, 6, 9, 13, 15, 17, 18, 21, 22, 25, 26, and 29

Claims 1, 9, 13, 21, and 29: Mochizuki et al discloses of an ultrasonic probe where the region of interest is imaged with ultrasound probe consisting of a probe housing 22 with the transducer array 28 pivotally attached within the probe housing. The transducer array is capable of rotating about the central scan plane as shown in figure 3 with the transducer rotation range, the transducer 28A is parallel to the longitudinal axis of the probe. The swinging or sweeping motion of the transducer array is control by a motor to form a volumetric or 3D scan consisting of series of oblique scan plane S oriented at an desired angle increment (col. 2, lines 16-46; col. 3, lines 23-66; figures 2-4).

Claims 2, 5, 6, 15, 17, 18, 22, 25, and 26: Mochizuki et al further discloses of stepper motor described above as being a stepper motor and photo or optic sensor to control the angle of the transducer array (col. 3, line 67 – col. 4, line 29).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 16, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mochizuki et al* in view of *Okunuki et al* (US 5,460,179).

Mochizuki et al substantially discloses of all claimed invention in claims 3, 16, and 23. Okunuki et al further teaches that the stepper motor control to change the angle of the transducer array is as in Mochizuki et al's ultrasonic probe may apply belt 52 and gear 50 to the motor 48 to turn the pivotally mounted transducer 28 about the pivoting axis 32 (col. 6, line12- col. 8, line 60). Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Mochizuki et al to the teachings of Okunuki et al to achieve the claimed invention.

5. Claims 4 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mochizuki et al* in view of *Cerofolini* (US 5,740,804).

Mochizuki et al substantially discloses of all claimed invention in claims 4 and 24. Cerofolini further teaches that the rotatable transducer array 56 pivoting about a central axis 31 at predetermined angle and control via stepper motor and hand crank 64 (figures 1 and 4; col. 5, lines 18-36; col. 4, lines 21-48). Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Mochizuki et al to the teachings of Cerofolini to achieve the claimed invention.

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6. Claims 7, 8, 19, 20, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mochizuki et al* as applied to claims 1, 13, and 21 above, and further in view of *Angelsen* (US 4,757,818).

Mochizuki et al substantially discloses of all claimed invention in claims 7, 8, 19, 20, 27, and 28. Angelsen further teaches that the rotating transducer array 230 about a pivoting axis 226 can be controlled with motor and the center alignment is controlled via magnetic sensor (col. 2, lines 4-24; col. 3, line 64 – col. 4, line 18). Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Mochizuki et al to the teachings of Angelsen to achieve the claimed invention.

7. Claims 10, 11, 12, 14, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mochizuki et al* as applied to claims 1, 13, and 21 above, and further in view of *Cerofolini*.

Mochizuki et al substantially discloses of all claimed invention in claims 10, 11, 12, 14, and 30-32.

Claims 10, 11, 30, and 31: Cerofolini further teaches that the rotatable transducer array 56 pivoting about a central axis 31 at predetermined angle and control via stepper motor and hand crank 64 (figures 1 and 4; col. 5, lines 18-36; col. 4, lines 21-48).

Claims 12, 14, and 32: Cerofolini also teaches that the probe device is design to be inserted into a patient via tracheal passage or body orifice, which would include endovaginal or rectal probe (col. 1, lines 21-39).

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Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Mochizuki et al to the teachings of Cerofolini to achieve the claimed invention.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*Solek* (US 6,099,474) and *Oakley et al* (US 5,413,107)

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung whose telephone number is 703-605-4364. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Ruhl can be reached on 703-305-2262. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

WCS

September 29, 2003



DENNIS RUHL  
PRIMARY EXAMINER